a. a dicamba-degrading oxygenase having the amino acid sequence of SEQ ID NO:4; and

b. a dicamba-degrading oxygenase having an amino acid sequence which is at least about 65% identical to the amino acid sequence of SEQ ID NO:4 and which has dicamba-degrading oxygenase activity.

3. (Once Amended) The DNA molecule of Claim 2 comprising the nucleotide sequence of SEQ ID NO:3.

4. (Twice Amended) A DNA construct comprising a DNA sequence encoding a dicamba-degrading oxygenase from a bacterium that degrades dicamba operatively linked to expression control sequences.

5. (Twice Amended) A DNA construct comprising a DNA sequence encoding a dicamba-degrading oxygenase operatively linked to expression control sequences, wherein said dicamba-degrading oxygenase is selected from the group consisting of:

a. a dicamba-degrading oxygenase having the amino acid sequence of SEQ ID NO:4; and

b. a dicamba-degrading oxygenase having an amino acid sequence which is at least about 65% identical to the amino acid sequence of SEQ ID NO:4 and which has dicamba-degrading oxygenase activity.

6. (Reiterated) The DNA construct of Claim 5 comprising the nucleotide sequence of SEQ ID NO:3.

7. (Once Amended) The DNA construct of Claim 4 or 5 which is a vector.

21. (Twice Amended) A transgenic host cell comprising DNA encoding a dicamba-degrading oxygenase, said DNA being operatively linked to expression control sequences;

wherein said dicamba-degrading oxygenase is selected from the group consisting of:

a. a dicamba-degrading oxygenase having the amino acid sequence of SEQ ID NO:4; and

b. a dicamba-degrading oxygenase having an amino acid sequence which is at least about 65% identical to the amino acid sequence of SEQ ID NO:4 and which has dicamba-degrading oxygenase activity.

22. (Reiterated) The transgenic host cell of Claim 21 wherein the DNA encodes a dicamba-degrading oxygenase having the amino acid sequence of SEQ ID NO:4.

23. (Reiterated) The transgenic host cell of Claim 22 wherein the DNA comprises the nucleotide sequence of SEQ ID NO:3.

24. (Once Amended) The transgenic host cell of Claim 21 or ~~58~~ 59 which is a plant cell.

36. (Twice Amended) A transgenic plant or part of a plant comprising one or more cells comprising DNA encoding a dicamba-degrading oxygenase, said DNA being operatively linked to expression control sequences;

wherein said dicamba-degrading oxygenase is selected from the group consisting of:

a. a dicamba-degrading oxygenase having the amino acid sequence of SEQ ID NO:4; and

b. a dicamba-degrading oxygenase having an amino acid sequence which is at least about 65% identical to the amino acid sequence of SEQ ID NO:4 and which has dicamba-degrading oxygenase activity.

37. (Reiterated) The transgenic plant or plant part of Claim 36 wherein the DNA encodes a dicamba-degrading oxygenase having the amino acid sequence of SEQ ID NO:4.

38. (Once Amended) The transgenic plant or plant part of Claim 37 wherein the DNA comprises the nucleotide sequence of SEQ ID NO:3.

39. (Once Amended) The transgenic plant or plant part of Claim 36 or ~~62~~ 63 wherein the plant is a broadleaf plant which is tolerant to dicamba as a result of the expression of the dicamba-degrading oxygenase and the plant part is a part of a broadleaf plant which is tolerant to dicamba as a result of the expression of the dicamba-degrading oxygenase.

44. (Twice Amended) A method of controlling weeds in a field containing a transgenic plant according to any one of Claims 36-39 or ~~61~~-64 62-65 comprising applying an amount of dicamba to the field effective to control the weeds in the field.

47. (Twice Amended) A method of selecting transformed plant cells comprising:

providing a population of plant cells;

transforming at least some of the plant cells in the population of plant cells with a DNA construct according to any one of Claims 4-7 or ~~53~~ 54-57; and

selecting the transformed plant cells by culturing the resulting population of plant cells in a culture medium containing dicamba at a concentration selected so that transformed plant cells proliferate and untransformed plant cells do not proliferate.

48. (Twice Amended) A method of selecting transformed plants comprising:

providing a population of plants which may comprise one or more plants comprising a DNA construct according to any one of Claims 4-7 or ~~53~~ 54-57; and

selecting transformed plants by applying an amount of dicamba to the population of plants selected so that transformed plants grow, and growth of untransformed plants is inhibited.

Please add the following new Claims 49-64.

50 ~~49~~. (Added) The DNA molecule of Claim 1 comprising a DNA sequence encoding a *Pseudomonas* dicamba-degrading oxygenase.

51 ~~50~~. (Added) The DNA molecule of Claim 1 comprising a DNA sequence encoding a *Pseudomonas maltophilia* dicamba-degrading oxygenase.

52 ~~51~~. (Added) The DNA molecule of Claim 2 comprising a DNA sequence encoding a dicamba-degrading oxygenase which is at least about 85% identical to the amino acid sequence of SEQ ID NO:4 and which has dicamba-degrading oxygenase activity.

53 ~~52~~. (Added) The DNA molecule of Claim 2 comprising a DNA sequence encoding a dicamba-degrading oxygenase having the amino acid sequence of SEQ ID NO:4.

54 ~~53~~. (Added) The DNA construct of Claim 4 comprising a DNA sequence encoding a *Pseudomonas* dicamba-degrading oxygenase.

55 ~~54~~. (Added) The DNA construct of Claim 4 comprising a DNA sequence encoding a *Pseudomonas maltophilia* dicamba-degrading oxygenase.

56 ~~55~~. (Added) The DNA construct of Claim 5 comprising a DNA sequence encoding a dicamba-degrading oxygenase which is at least about 85% identical to the amino acid sequence of SEQ ID NO:4 and which has dicamba-degrading oxygenase activity.

57 ~~56~~. (Added) The DNA construct of Claim 5 comprising a DNA sequence encoding a dicamba-degrading oxygenase having the amino acid sequence of SEQ ID NO:4.

58 ~~57~~. (Added) The transgenic host cell of Claim 21 wherein the DNA encodes a dicamba-degrading oxygenase which is at least about 85% identical to the amino acid sequence of SEQ ID NO:4 and which has dicamba-degrading oxygenase activity.

59 ~~58~~. (Added) A transgenic host cell comprising DNA encoding a dicamba-degrading oxygenase from a bacterium that degrades dicamba, said DNA being operatively linked to expression control sequences.

60 ~~59~~. (Added) The transgenic host cell of Claim ~~58~~ 59 wherein the DNA encodes a *Pseudomonas* dicamba-degrading oxygenase.

61 ~~60~~. (Added) The transgenic host cell of Claim ~~58~~ 59 wherein the DNA encodes a *Pseudomonas maltophilia* dicamba-degrading oxygenase.

62 ~~61~~. (Added) The transgenic plant or plant part of Claim 36 wherein the DNA encodes a dicamba-degrading oxygenase which is at least about 85% identical to the amino acid sequence of SEQ ID NO:4 and which has dicamba-degrading oxygenase activity.

63 ~~62~~. (Added) A transgenic plant or part of a plant comprising one or more cells comprising DNA encoding a dicamba-degrading oxygenase from a bacterium that degrades dicamba, said DNA being operatively linked to expression control sequences.

64 ~~63~~. (Added) The transgenic plant or plant part of Claim ~~62~~ 63 wherein the DNA encodes a *Pseudomonas* dicamba-degrading oxygenase.

65 ~~64~~. (Added) The transgenic plant or plant part of Claim ~~62~~ 63 wherein the DNA encodes a *Pseudomonas maltophilia* dicamba-degrading oxygenase.